

REMARKS

Applicant thanks the Examiner for her careful consideration of this case.

Claims 56, 58-62, 65-67, 69-76, 78-81, 84-86 and 88-98 are currently pending in the application. Claims 56, 58-62, 65-67, 69-76, 78-81, 84-86 and 88-98 are rejected under 35 U.S.C. § 112, first and/or second paragraph. Claims 56, 58-62, 69, 76, 78-81, 88-90, 97 and 98 are rejected under 35 U.S.C. § 102(a) and/or 102(b) over Danishefsky et al. (Angew. Chem. Int. Ed., 2000, **39**, pp. 836-863), WO 99/48515 and Toyokuni et al. (Chemical Society Reviews, 1995, **24**, pp. 321-242). In addition, the claims are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over co-pending application Nos.: 10/209,618 and 10/728,041.

Amendments to the Claims

Claims 56, 58, 61, 62, 76, 78 and 81 have been amended. Claims 59, 60, 65-67, 69-75, 79-80, 84-86 and 88-98 remain unchanged. Applicant respectfully submits that no new matter is added through the proposed amendment to the claims. Specifically, claims 56 and 76 have been amended to recite a peptidic backbone made up of at least three amino acid residues. Support for such language can be found throughout the specification (see for example original claim 27). Claims 56, 61, 62, 76 and 81 have been amended to remove the provision that the x, y and z bracketed structure may be furanose moieties. Claims 58 and 78, as amended, recite an immunostimulant carrier. Support for this language can be found throughout the specification and Figures for example in the teaching that immunostimulant carriers bovine serum albumin, KLH and PamCys may be used to make and use the claimed glycopeptides.

No new matter is being introduced by these amendments. Applicant is submitting the present amendments without prejudice to the subsequent prosecution of claims to some or all of the subject matter which might be lost by virtue of this paper, and explicitly reserves the right to pursue the subject matter of any of the canceled claims, or some or all of the subject matter which might be lost by virtue of this paper, in Divisional or Continuation Applications.

Below we address each of the rejections stated in the Office Action as if it were applied to the newly amended claims.

1. Rejection under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 58 and 78 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner objected to the term "suitable" as

failing to state the purpose by which to judge the suitability. The claims, as amended, no longer recite the language objected to. Thus, the stated rejection is now moot. Accordingly, Applicant respectfully requests that the § 112 rejection, second paragraph, of record be withdrawn.

2. Rejections under 35 U.S.C. § 112, first paragraph

The Examiner has rejected claims 56, 58-62, 65-67, 69-76, 78-81, 84-86 and 88-98 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement.

Specifically, the Examiner states that the “2 to 25” language in claims 56 and 76 finds no support in the specification. Without conceding the Examiner’s assertion, but solely to expedite prosecution of the claims, as now amended, Applicant has deleted the stated language from the claims, thereby obviating the rejection. The Examiner also asserts that the language “two or more of said amino acids is independently substituted” finds no support in the specification. Applicant respectfully disagrees and submits that the specification, figures and claims, as originally filed, fully support this language in the teaching of multi-antigenic glycopeptides (*i.e.*, glycopeptides comprising multiple carbohydrate antigens). See, for example, lines 18-23 on page 35 of the specification. The claimed glycopeptides, being multi-antigenic, necessarily comprise more than one carbohydrate antigens. Additional support can be found, for example, in Figures 15 and 16, which depict di- and tri-meric antigenic glycopeptides. Thus the language “wherein one or more of said amino acids are substituted” was inconsistent with the multi-antigenic concept. The language “two or more of said amino acids is independently substituted” was introduced to correct this discrepancy, and to reflect what Applicant means as the invention. Should the Examiner deem it necessary, the Applicant is prepared to make the same amendment throughout the specification.

The Examiner also states that the specification as originally filed contemplates glycopeptides wherein amino acid residues are substituted with the allyl glycosidic moiety having the structure found on page 10 and claim 61 section (a) (See end of third paragraph on page 3 of the Examiner’s Office Action). Applicant does not understand what the Examiner means, and respectfully requests clarification. There is no allyl glycosidic moiety on page 10 of the specification. Furthermore, the alkenyl glycoside of claim 61 (a) is merely an intermediate for the preparation of the glycoamino acid of claim 61 section (b), which is in turn used to make the claimed glycopeptides via peptidic linkage (See for example Figure 15, Table 2 on page 75 and discussion starting at line 24 on pages 73 and ending at line 17 on page 76). There is no provision anywhere in the specification as originally filed that at least one of the glycopeptide amino acids

have the allyl glycosidic moiety of claim 61 (a). Applicant will address this rejection after the Examiner clarifies her objection.

In addition, the Examiner asserts that claims 56, 58-62, 65-67, 69-76, 78-81, 84-86 and 88-98 do not find adequate support in the specification, as originally filed. Specifically, the Examiner states that the specification does not reasonably provide enablement for multiantigenic glycopeptides comprising furanose moieties. Without conceding the correctness of the Examiner's statement, but solely in an effort to expedite prosecution, Applicant has amended the claims to remove the possibility that the claimed glycopeptides comprise furanose moieties.

In light of the foregoing remarks, Applicant respectfully requests that the stated rejections under 35 U.S.C. § 112, first paragraph, be withdrawn.

3. Rejections under 35 U.S.C. § 102

A. The Examiner has rejected claims 56, 58-61, 69, 76, 78-80, 88, 97 and 98 under 35 U.S.C. § 102 (a) as being anticipated by Danishefsky et al. (Angew. Chem. Int. Ed., 2000, **39**, pp. 836-863). Specifically, the Examiner points to the structures on pages 855-859 of the cited reference and states that they anticipate the instant claims. Applicant respectfully disagrees and submits that in the glycopeptides of pages 855-859 of the cited reference, the antigen-bearing amino acid residues are substituted with a glycosidic moiety having the structure A-O-, wherein A is selected from Tn, TF, 2,6-STF, STn and Le^y, and wherein each occurrence of A is the same throughout the glycopeptide. These glycopeptides are specifically excluded from the instant claims by virtue of the proviso of claim 56, which recites that "if for each occurrence of n, n = 0, at least one occurrence of A has a different structure from other occurrences of A." Accordingly, the cited reference cannot anticipate the present claims.

B. The Examiner has rejected claims 56, 58, 62, 69, 76, 78-81 and 88-90 under 35 U.S.C. § 102 (a) as being anticipated by WO 99/48515. Specifically, the Examiner points to compounds 3, 4 and 5 in Figure 20 of the cited reference (citing Figures 20A and 20C), and states that they anticipate the instant claims. Applicant respectfully disagrees and submits that in the glycopeptides referred to by the Examiner, the antigen-bearing amino acid residues are substituted with a glycosidic moiety having the structure A-O-, wherein A is Tn (i.e., occurrence of A is the same throughout the glycopeptide). As discussed above, these glycopeptides are specifically excluded from the instant claims by virtue of the proviso of claim 56. Accordingly, the cited reference cannot anticipate the present claims.

C. The Examiner has rejected claims 56, 61, 69, 76 and 78 under 35 U.S.C. § 102 (b) as being anticipated by Toyokuni et al. (Chemical Society Reviews, 1995, **24**, pp. 321-242). Specifically, the Examiner points to compound 19 in Scheme 11 of the cited reference, and states that it anticipates the instant claims. Applicant respectfully disagrees and submits that in the glycopeptides referred to by the Examiner, the antigen-bearing amino acid residues are substituted with a glycosidic moiety having the structure A-O-, wherein A is Tn (i.e., occurrence of A is the same throughout the glycopeptide). As discussed above, these glycopeptides are specifically excluded from the instant claims by virtue of the proviso of claim 56. Accordingly, the cited reference cannot anticipate the present claims.

4. Provisional Obviousness-type Double Patenting Rejection

The Examiner has provisionally rejected claims 56, 58-62, 65-67, 69-76, 78-81, 84-86 and 88-98 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 118-198 of co-pending application No.: 10/209,618 and claims 1-36 of co-pending application No.: 10/728,041.

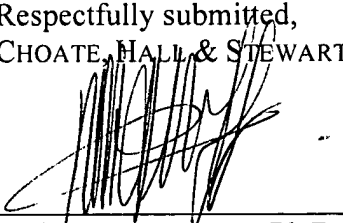
Applicant respectfully refrains from commenting on this provisional rejection unless and until such time as it matures into an actual rejection. Application serial numbers 10/209,618 and 10/728,041 and the instant application are assigned to the same entity. Once allowable subject matter has been found in application serial number 10/209,618 and/or 10/728,041, and if the allowed claims in 10/209,618 and/or 10/728,041 are not deemed patentably distinct from the allowed claims in the instant application, Applicant is prepared to file a terminal disclaimer in application serial number 10/209,618 and/or 10/728,041.

CONCLUSION

Applicant thanks Examiner Canella for her time and consideration. If a telephone conversation would help clarify any issues, or help expedite prosecution of this case, Applicant invites the Examiner to contact the undersigned at (617) 248-5150.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that any additional fees are required for consideration of this paper (including fees for net addition of claims), these fees are authorized to be charged to our Deposit Account No. 03-1721.

Respectfully submitted,
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